

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332327

Luminaire Tested: **S123RDIP-S775D1195U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332327
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D1195U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7689.8 lumens
Efficiency: N/A
Efficacy: 135.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

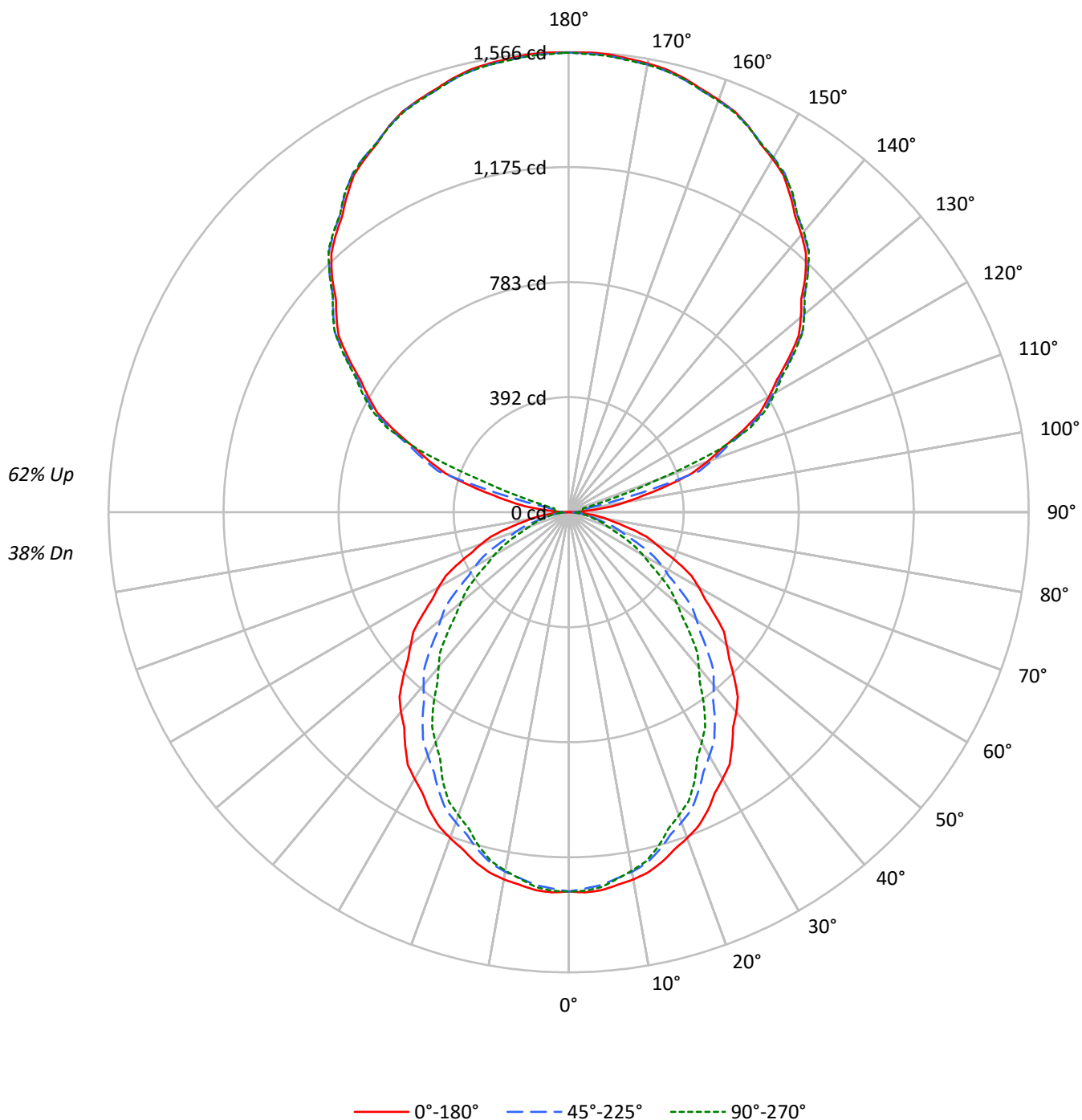
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	104	104	104	104	95	95	95	95	77	77	77		60	60	60		45
1	95	91	87	84	86	83	80	77	67	65	63		53	52	51		40
2	87	80	74	69	79	73	68	63	59	56	53		47	45	43		36
3	79	70	63	58	72	64	58	53	53	48	45		42	39	36		32
4	73	62	55	49	66	57	50	45	47	42	38		37	34	31		29
5	67	56	48	42	60	51	44	39	42	37	33		34	30	27		26
6	62	50	42	36	56	46	39	34	38	33	29		30	27	24		23
7	57	45	37	32	52	41	35	30	34	29	25		28	24	21		21
8	53	41	33	28	48	38	31	26	31	26	23		25	22	19		20
9	49	37	30	25	45	34	28	23	29	24	20		23	20	17		18
10	46	34	27	22	42	31	25	21	26	21	18		21	18	15		17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13897	13897	13897
5°	13950	13758	13837
10°	13871	13585	13539
15°	13722	13266	13127
20°	13518	12869	12569
25°	13307	12423	12025
30°	13027	11908	11257
35°	12741	11393	10553
40°	12476	10784	9681
45°	12129	10185	8894
50°	11747	9503	8013
55°	11357	8724	7191
60°	11001	7890	6288
65°	10534	6986	5387
70°	9951	5866	4349
75°	9100	4616	4092
80°	8114	4091	3763
85°	6854	3619	3359

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.2	1.6
10°-20°	337.3	4.4
20°-30°	485.7	6.3
30°-40°	547.1	7.1
40°-50°	523.4	6.8
50°-60°	428.6	5.6
60°-70°	289.2	3.8
70°-80°	145.5	1.9
80°-90°	42.9	0.6
90°-100°	56.9	0.7
100°-110°	271.0	3.5
110°-120°	650.9	8.5
120°-130°	828.8	10.8
130°-140°	885.6	11.5
140°-150°	828.1	10.8
150°-160°	668.0	8.7
160°-170°	431.1	5.6
170°-180°	148.6	1.9
0°-30°	944.3	12.3
0°-40°	1491.4	19.4
0°-60°	2443.4	31.8
0°-90°	2921.0	38.0
90°-120°	978.7	12.7
90°-150°	3521.2	45.8
90°-180°	4769.0	62.0
0°-180°	7689.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1291	1291	1291	1291	1291	
5°	1291	1285	1273	1282	1281	122
15°	1231	1219	1190	1185	1178	347
25°	1120	1093	1046	1025	1012	515
35°	970	930	867	823	803	607
45°	797	748	669	611	584	615
55°	605	552	465	406	383	542
65°	414	355	274	225	212	409
75°	219	168	111	101	98	233
85°	56	34	29	27	27	62
90°	1	13	28	32	35	6
95°	71	27	36	44	44	88
105°	346	352	254	60	51	367
115°	650	657	667	678	683	641
125°	916	925	929	932	934	817
135°	1140	1147	1151	1154	1151	877
145°	1315	1323	1326	1328	1328	823
155°	1449	1447	1448	1453	1446	667
165°	1528	1524	1523	1531	1524	431
175°	1564	1558	1559	1566	1558	149
180°	1564	1564	1564	1564	1564	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1
2.5°	1295.2	1294.5	1293.7	1293.0	1292.3	1290.8	1288.5	1286.3	1284.1	1281.8	1283.9
5°	1291.1	1289.9	1288.7	1287.6	1286.4	1284.4	1281.6	1278.8	1276.0	1273.3	1275.3
7.5°	1279.1	1277.9	1276.6	1275.3	1274.1	1271.6	1268.0	1264.4	1260.8	1257.1	1258.3
10°	1269.1	1267.4	1265.8	1264.2	1262.5	1259.6	1255.4	1251.3	1247.1	1242.9	1243.1
12.5°	1254.8	1253.0	1251.2	1249.4	1247.6	1244.1	1239.0	1233.9	1228.7	1223.6	1223.5
15°	1231.4	1228.8	1226.2	1223.7	1221.1	1216.6	1210.1	1203.6	1197.0	1190.5	1189.4
17.5°	1201.8	1198.9	1195.9	1192.9	1189.9	1184.3	1176.0	1167.7	1159.4	1151.2	1148.7
20°	1180.1	1176.3	1172.6	1168.9	1165.2	1158.9	1150.0	1141.2	1132.4	1123.5	1120.5
22.5°	1155.8	1151.5	1147.2	1142.9	1138.6	1131.8	1122.4	1113.0	1103.6	1094.2	1090.4
25°	1120.4	1114.6	1108.7	1102.9	1097.1	1088.8	1078.1	1067.4	1056.7	1046.0	1041.1
27.5°	1077.4	1071.0	1064.6	1058.2	1051.8	1042.6	1030.7	1018.8	1006.8	994.9	988.1
30°	1048.1	1041.1	1034.2	1027.2	1020.2	1010.2	997.2	984.1	971.1	958.1	950.2
32.5°	1018.8	1010.9	1003.0	995.1	987.2	976.3	962.5	948.8	935.0	921.2	912.6
35°	969.6	961.2	952.8	944.5	936.1	924.7	910.3	895.8	881.4	867.0	857.0
37.5°	919.8	910.4	901.1	891.8	882.5	870.2	854.8	839.4	824.0	808.6	797.2
40°	887.9	877.7	867.4	857.2	847.0	833.6	817.1	800.6	784.0	767.5	755.4
42.5°	851.9	841.7	831.4	821.2	811.0	797.3	780.2	763.1	746.1	729.0	715.8
45°	796.8	786.4	775.9	765.4	754.9	740.8	722.8	704.9	687.0	669.1	655.8
47.5°	741.8	730.3	718.8	707.3	695.8	681.1	663.2	645.2	627.3	609.4	595.0
50°	701.5	690.6	679.7	668.7	657.8	642.9	624.1	605.2	586.4	567.5	553.1
52.5°	665.5	653.7	641.8	629.9	618.1	602.8	584.1	565.5	546.8	528.1	513.2
55°	605.2	593.8	582.4	571.0	559.6	544.0	524.2	504.5	484.7	464.9	451.4
57.5°	549.5	537.1	524.7	512.2	499.8	483.7	463.8	443.9	424.0	404.2	391.4
60°	511.0	498.2	485.4	472.6	459.8	443.7	424.4	405.1	385.8	366.5	353.9
62.5°	472.4	459.6	446.8	434.0	421.3	405.2	385.9	366.6	347.3	327.9	316.1
65°	413.6	400.8	388.0	375.2	362.4	346.9	328.8	310.6	292.5	274.3	262.9
67.5°	354.8	341.8	328.9	315.9	303.0	287.8	270.4	253.0	235.6	218.2	209.7
70°	316.2	303.7	291.1	278.5	266.0	251.5	235.2	219.0	202.7	186.4	178.2
72.5°	277.7	265.3	252.9	240.5	228.2	214.6	199.8	185.0	170.2	155.4	148.7
75°	218.8	207.7	196.5	185.3	174.2	162.2	149.4	136.6	123.8	111.0	108.7
77.5°	165.2	155.1	145.0	134.9	124.8	115.7	107.4	99.2	91.0	82.7	81.5
80°	130.9	121.3	111.8	102.3	92.7	85.5	80.6	75.7	70.9	66.0	65.3
82.5°	98.2	90.0	81.7	73.5	65.3	60.0	57.7	55.4	53.2	50.9	50.2
85°	55.5	50.4	45.3	40.1	35.0	32.1	31.4	30.7	30.0	29.3	28.9
87.5°	20.3	18.8	17.3	15.7	14.2	13.8	14.5	15.1	15.8	16.5	16.5
90°	1.2	3.7	6.3	8.9	11.5	14.5	17.8	21.2	24.5	27.9	28.9
92.5°	21.6	20.9	20.2	19.4	18.7	19.6	22.2	24.7	27.2	29.7	31.4
95°	70.9	60.3	49.7	39.1	28.5	24.7	27.5	30.3	33.2	36.0	37.8
97.5°	142.4	137.7	132.9	128.2	123.4	111.8	93.2	74.6	56.0	37.4	39.5
100°	196.3	201.5	206.7	211.8	217.0	199.4	159.2	118.9	78.6	38.3	40.4
102.5°	257.7	261.4	265.1	268.8	272.6	252.4	208.4	164.4	120.4	76.4	70.0
105°	346.2	349.1	351.9	354.7	357.6	347.4	324.1	300.9	277.7	254.4	208.7
107.5°	439.6	441.9	444.2	446.4	448.7	451.7	455.4	459.0	462.7	466.4	432.8
110°	501.9	504.0	506.0	508.1	510.2	512.6	515.5	518.3	521.1	524.0	515.5

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	561.4	563.2	565.1	567.0	568.8	571.2	574.0	576.9	579.7	582.5	582.7
115°	649.5	651.0	652.5	654.1	655.6	657.6	659.9	662.2	664.6	666.9	669.5
117.5°	734.7	736.6	738.5	740.5	742.4	743.9	745.1	746.3	747.5	748.7	750.7
120°	787.7	790.0	792.4	794.7	797.0	798.6	799.3	800.1	800.9	801.6	803.7
122.5°	841.6	843.5	845.4	847.3	849.3	850.7	851.7	852.7	853.6	854.6	856.1
125°	915.5	917.6	919.6	921.7	923.8	925.3	926.3	927.4	928.4	929.4	930.0
127.5°	987.1	989.1	991.2	993.3	995.3	997.0	998.2	999.5	1000.7	1001.9	1002.8
130°	1031.7	1033.8	1035.8	1037.9	1039.9	1041.5	1042.5	1043.6	1044.6	1045.6	1046.7
132.5°	1074.4	1076.5	1078.6	1080.6	1082.7	1084.1	1085.0	1085.8	1086.6	1087.5	1088.5
135°	1139.7	1141.3	1142.8	1144.4	1145.9	1147.2	1148.3	1149.3	1150.3	1151.4	1152.1
137.5°	1195.5	1197.5	1199.4	1201.4	1203.4	1204.6	1205.2	1205.8	1206.3	1206.9	1208.1
140°	1232.7	1234.2	1235.8	1237.3	1238.9	1240.0	1240.8	1241.6	1242.4	1243.1	1244.2
142.5°	1267.1	1268.6	1270.2	1271.7	1273.3	1274.4	1275.2	1276.0	1276.8	1277.5	1278.4
145°	1315.2	1317.0	1318.8	1320.6	1322.4	1323.6	1324.1	1324.6	1325.1	1325.6	1326.1
147.5°	1360.5	1361.7	1362.9	1364.0	1365.2	1366.1	1366.6	1367.1	1367.6	1368.1	1368.7
150°	1388.4	1389.1	1389.9	1390.7	1391.5	1392.1	1392.6	1393.1	1393.7	1394.2	1394.7
152.5°	1413.5	1413.8	1414.2	1414.5	1414.9	1415.2	1415.5	1415.9	1416.2	1416.5	1417.4
155°	1448.8	1448.3	1447.7	1447.2	1446.7	1446.6	1446.8	1447.1	1447.4	1447.6	1448.9
157.5°	1476.2	1476.1	1476.1	1476.0	1476.0	1475.8	1475.6	1475.3	1475.1	1474.8	1476.4
160°	1492.9	1492.7	1492.4	1492.2	1491.9	1491.6	1491.4	1491.1	1490.9	1490.6	1492.2
162.5°	1508.7	1508.1	1507.4	1506.7	1506.0	1505.6	1505.3	1505.1	1504.8	1504.5	1506.3
165°	1527.8	1527.0	1526.2	1525.5	1524.7	1524.2	1523.9	1523.6	1523.4	1523.1	1525.2
167.5°	1542.7	1541.6	1540.6	1539.6	1538.5	1538.0	1538.0	1538.0	1538.0	1538.0	1540.1
170°	1551.0	1550.0	1549.0	1547.9	1546.9	1546.4	1546.4	1546.4	1546.4	1546.4	1548.4
172.5°	1556.6	1555.4	1554.1	1552.9	1551.6	1551.1	1551.3	1551.5	1551.7	1551.9	1554.0
175°	1563.8	1562.5	1561.2	1559.9	1558.6	1558.1	1558.4	1558.6	1558.9	1559.1	1561.0
177.5°	1565.7	1564.6	1563.6	1562.6	1561.5	1561.1	1561.3	1561.5	1561.7	1561.9	1563.6
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1
2.5°	1285.9	1288.0	1290.0	1290.9	1290.5	1290.1	1289.7	1289.4
5°	1277.4	1279.5	1281.6	1282.4	1282.0	1281.5	1281.0	1280.6
7.5°	1259.5	1260.6	1261.8	1262.0	1261.2	1260.4	1259.6	1258.8
10°	1243.4	1243.6	1243.8	1243.4	1242.2	1241.0	1239.9	1238.7
12.5°	1223.3	1223.2	1223.1	1222.3	1221.0	1219.6	1218.3	1216.9
15°	1188.2	1187.0	1185.9	1184.5	1182.9	1181.2	1179.6	1178.0
17.5°	1146.2	1143.8	1141.3	1138.9	1136.4	1134.0	1131.6	1129.2
20°	1117.5	1114.4	1111.4	1108.5	1105.7	1102.9	1100.1	1097.3
22.5°	1086.7	1082.9	1079.1	1075.9	1073.3	1070.7	1068.1	1065.5
25°	1036.3	1031.4	1026.5	1022.8	1020.2	1017.6	1015.1	1012.5
27.5°	981.3	974.6	967.8	962.4	958.5	954.6	950.7	946.8
30°	942.3	934.3	926.4	920.6	916.9	913.2	909.4	905.7
32.5°	903.9	895.3	886.6	880.3	876.4	872.5	868.6	864.7
35°	847.0	837.0	827.0	819.9	815.7	811.5	807.3	803.1
37.5°	785.8	774.5	763.1	754.9	749.7	744.5	739.4	734.2
40°	743.3	731.2	719.1	710.4	705.0	699.7	694.3	689.0
42.5°	702.5	689.3	676.1	667.1	662.3	657.5	652.7	647.9
45°	642.6	629.3	616.0	606.6	601.0	595.4	589.9	584.3
47.5°	580.5	566.1	551.7	542.0	537.0	532.0	527.1	522.1
50°	538.7	524.2	509.8	499.9	494.6	489.2	483.9	478.5
52.5°	498.2	483.2	468.2	458.3	453.5	448.7	443.9	439.1
55°	437.9	424.4	410.9	401.8	397.2	392.5	387.9	383.2
57.5°	378.7	365.9	353.2	344.8	340.9	336.9	332.9	329.0
60°	341.3	328.8	316.2	308.0	304.0	300.0	296.1	292.1
62.5°	304.3	292.5	280.7	272.7	268.5	264.4	260.3	256.1
65°	251.5	240.1	228.7	221.7	219.2	216.6	214.1	211.5
67.5°	201.2	192.7	184.1	178.5	175.8	173.0	170.3	167.5
70°	170.1	161.9	153.8	148.5	145.9	143.3	140.8	138.2
72.5°	142.1	135.4	128.8	124.9	123.8	122.8	121.7	120.6
75°	106.3	104.0	101.7	100.3	99.8	99.4	98.9	98.4
77.5°	80.2	78.9	77.7	76.8	76.4	75.9	75.4	75.0
80°	64.6	63.9	63.2	62.6	62.1	61.7	61.2	60.7
82.5°	49.5	48.8	48.1	47.7	47.6	47.5	47.4	47.3
85°	28.4	27.9	27.5	27.2	27.2	27.2	27.2	27.2
87.5°	16.5	16.5	16.5	16.5	16.4	16.4	16.3	16.2
90°	29.9	31.0	32.0	32.8	33.3	33.8	34.3	34.9
92.5°	33.0	34.7	36.4	37.3	37.6	38.0	38.3	38.6
95°	39.6	41.4	43.2	44.1	44.1	44.1	44.1	44.1
97.5°	41.5	43.6	45.7	46.8	47.1	47.4	47.6	47.9
100°	42.5	44.5	46.6	47.8	48.0	48.3	48.5	48.8
102.5°	63.6	57.2	50.8	47.9	48.3	48.8	49.3	49.7
105°	163.0	117.3	71.6	49.1	49.6	50.1	50.6	51.1
107.5°	399.3	365.8	332.3	298.3	263.9	229.4	195.0	160.6
110°	506.9	498.4	489.9	467.2	430.3	393.3	356.4	319.5

TEST NUMBER: P332327

CATALOG NUMBER: S123RDIP-S775D1195U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	582.8	583.0	583.2	579.3	571.5	563.7	555.9	548.1
115°	672.0	674.6	677.2	679.0	680.0	681.1	682.1	683.1
117.5°	752.8	754.9	756.9	758.1	758.3	758.5	758.7	758.9
120°	805.8	807.8	809.9	810.9	810.9	810.9	810.9	810.9
122.5°	857.5	859.0	860.4	861.2	861.4	861.6	861.9	862.1
125°	930.5	931.0	931.5	932.0	932.5	933.1	933.6	934.1
127.5°	1003.6	1004.4	1005.2	1005.4	1004.9	1004.4	1003.9	1003.3
130°	1047.7	1048.7	1049.8	1050.0	1049.5	1049.0	1048.5	1048.0
132.5°	1089.5	1090.6	1091.6	1091.7	1091.0	1090.3	1089.6	1088.8
135°	1152.9	1153.7	1154.5	1154.5	1153.7	1152.9	1152.1	1151.4
137.5°	1209.4	1210.6	1211.8	1212.2	1211.7	1211.2	1210.7	1210.1
140°	1245.2	1246.2	1247.3	1247.5	1247.0	1246.5	1246.0	1245.5
142.5°	1279.2	1280.0	1280.8	1280.9	1280.2	1279.4	1278.7	1278.0
145°	1326.7	1327.2	1327.7	1327.9	1327.9	1327.9	1327.9	1327.9
147.5°	1369.2	1369.7	1370.2	1369.9	1368.7	1367.5	1366.3	1365.1
150°	1395.2	1395.7	1396.2	1396.1	1395.3	1394.6	1393.8	1393.0
152.5°	1418.3	1419.3	1420.2	1420.1	1418.9	1417.7	1416.5	1415.3
155°	1450.2	1451.5	1452.8	1452.6	1451.1	1449.6	1448.0	1446.5
157.5°	1477.9	1479.4	1481.0	1480.8	1478.8	1476.7	1474.7	1472.7
160°	1493.7	1495.2	1496.8	1496.7	1494.9	1493.1	1491.2	1489.4
162.5°	1508.1	1509.8	1511.6	1511.6	1510.0	1508.4	1506.8	1505.2
165°	1527.3	1529.3	1531.4	1531.5	1529.7	1527.9	1526.1	1524.3
167.5°	1542.1	1544.2	1546.3	1546.3	1544.2	1542.1	1540.1	1538.0
170°	1550.5	1552.6	1554.6	1554.6	1552.6	1550.5	1548.4	1546.4
172.5°	1556.1	1558.1	1560.2	1560.1	1557.8	1555.6	1553.3	1551.0
175°	1562.8	1564.6	1566.4	1566.2	1564.2	1562.1	1560.1	1558.0
177.5°	1565.2	1566.9	1568.5	1568.3	1566.3	1564.2	1562.1	1560.1
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8

(END OF REPORT)